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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,536

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Lalita Manchanda

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01/09/2008

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PHILADELPHIA, PA 19102

EXAMINER

SCHILLINGER, LAURA M

ART UNIT

PAPER NUMBER

2813

MAIL DATE

DELIVERY MODE

01/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/718,536

Applicant(s)

MANCHANDA ET AL.

Examiner

Laura M. Schillinger

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 13-16, 19, 21 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 13-16, 19, 21 and 27-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Budd et al ('512).

Budd teaches the following claimed limitations as cited below:

13. A method of fabricating a dielectric material, said method comprising:  
incorporating a Group V element in a Group III metal oxide wherein said dielectric material is deposited in an atmosphere comprising a mixture of oxygen and nitrogen having an oxygen to nitrogen ratio from about 24:6 to 18:12 (Col.4, lines: 30-40, see also Col.4, lines: 15-20)

14. A method according to claim 13, wherein said Group III metal oxide is aluminum oxide (Col.4, lines: 15-20).

15. A method according to claim 13, wherein said Group V element is selected from the group consisting of nitrogen and phosphorous (Col.4, lines: 30-40).

16. A method according to claim 14, wherein said Group V element is selected from the group consisting of nitrogen and phosphorous (Col.4, lines: 30-40).

18. A method according to claim 17, wherein said mixture of oxygen and nitrogen has an oxygen-to-nitrogen ratio ranging from 24:6 to 9:21 (Col.4, lines: 30-40).

19. A method according to claim 17, wherein said mixture of oxygen and nitrogen has an oxygen-to-nitrogen ratio of 18:12 (Col.4, lines: 35-40- Budd is teaching the range of ratios is between 4:1 and 1:1; 18:12 (3:2) falls within this range).

21. A method according to claim 13, wherein said dielectric material is formed by a technique selected from the group consisting of reactive sputtering, annealing, atomic layer deposition (ALD), chemical vapor deposition (CVD), metal organic chemical vapor deposition (MOCVD), plasma nitridation, and oxidation of metal nitrides (Col.4, lines: 60-68).

27. (New) A method according to claim 13, comprising forming the dielectric material on a substrate using the oxygen and the nitrogen from said atmosphere (Col.5, lines: 1-10).

28. (New) A method according to claim 16, wherein: said dielectric material is formed by a technique selected from the group consisting of reactive sputtering, annealing, (ALD), (CVD), (MOCVD), plasma nitridation, and oxidation of metal nitrides; and the method comprises the step of forming the dielectric material on a substrate using the oxygen and the nitrogen from said atmosphere (Col.4-5, lines: 60-10).

29. (New) A method according to claim 28, wherein said mixture of oxygen and nitrogen has an oxygen-to-nitrogen ratio of about 18:12 (Col.4, lines: 35-40- Budd is teaching the range of ratios is between 4:1 and 1:1; 18:12 (3:2) falls within this range).

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***Response to Arguments***

Applicant's arguments filed 5/1/07 have been fully considered but they are not persuasive. Applicant argues that the ratios taught by Budd refer to the coatings ratio and not the atmosphere to form the coatings ratio- and therefore Budd fails to teach forming an atmosphere with the claimed ratio. Such an argument is not persuasive because:

- 1) budd teaches that the atmosphere includes the ratios in Tables 1-3
- 2) budd teaches that the atmosphere would be tailored to create the O/N layer with the desired ratio (Col.6, lines: 30-40)
- 3) lastly the Examiner cannot understand how the atmosphere to form a O/N layer could be any different from the resulting O/N coating- such an element is inherent

Lastly, Applicant argues that phosphor is not taught by Budd- such an argument does not overcome the rejections of claims 15 and 16 –because the claims are anticipated by the inclusion of nitrogen which anticipates the Markush group language.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



02/02/07



Laura M Schillinger  
Primary Examiner  
Art Unit 2813